

CLAIMS

What is claimed is:

1. A non-server type voice packet communication method, which comprises:

an IP address inquiring step, which transmits an IP address inquiring signal to a non-server type voice packet communication device using dial tones;

an IP address receiving step, which receives an IP address data transmitted from the non-server type voice packet communication device using the dial tones; and

a voice packet transmitting step, which transmits at least one voice packet to the non-server type voice packet communication device according to the IP address data.

2. The method of claim 1, further comprising:

a telephone number receiving step, which receives a telephone number from a first telephone; wherein the IP address inquiring step transmits the IP address inquiring signal to the non-server type voice packet communication device according to the telephone number.

3. The method of claim 1, further comprising:

an IP address recording step, which records the IP address data in an IP address record table that stores the correspondence relations between the IP address data and a telephone number.

4. The method of claim 3, further comprising:

a correspondence record inquiring step, which checks whether the correspondence relation for the IP address data and the telephone number already exists in the IP address record table and transmits to voice packet

according to the IP address data stored in the IP address record table when the relation exists.

5. The method of claim 1, further comprising:

5 a checking step, which checks whether the voice packet is successfully sent to the non-server type voice packet communication device.

6. The method of claim 5, wherein the IP address inquiring step is performed when the voice packet cannot be successfully sent to the non-server type voice packet communication device.

10 7. The method of claim 1, wherein the non-server type voice packet communication device couples to an NAT (Network Address Translator); and the non-server type voice packet communication device receives the voice packet transmitted in the voice packet-transmitting step.

8. The method of claim 7, further comprising:

15 transmitting a self-address inquiring packet from the non-server type voice packet communication device to the NAT; and

receiving the IP address data transmitted from the NAT according to the self-address inquiring packet to the non-server type voice packet communication device.

20 9. The method of claim 8, wherein the self-address inquiring packet is transmitted to an IP address analyzer through the NAT, and the IP address analyzer sends the IP address data in the header of the self-address inquiring packet back to the non-server type voice packet communication device.

10. The method of claim 7, wherein the IP address data include the IP address and the port used by the non-server type voice packet communication device on the NAT.

11. A non-server type voice packet communication device, which comprises:

an IP address inquiring module, which transmits an IP address inquiring signal to a second non-server type voice packet communication device using dial tones;

an IP address receiving module, which receives an IP address data transmitted from the second non-server type voice packet communication device using the dial tones; and

a voice packet transmitting module, which transmits at least one voice packet to the second non-server type voice packet communication device according to the IP address data.

12. The device of claim 11, further comprising:

a telephone number receiving module, which receives a telephone number from a first telephone; wherein the IP address inquiring module transmits the IP address inquiring signal to the non-server type voice packet communication device according to the telephone number.

13. The device of claim 11, further comprising:

an IP address recording module, which records the received IP address data in an IP address record table that stores the correspondence relations between the IP address data and a telephone number.

14. The device of claim 11, further comprising:

a correspondence record inquiring module, which checks whether the correspondence relation for the IP address data and the telephone number already exists in the IP address record table and transmits to voice packet according to the IP address data stored in the IP address record table when the relation exists.

15. The device of claim 14, further comprising:

a checking module, which checks whether the voice packet is successfully sent to the non-server type voice packet communication device.

5 16. The device of claim 11, wherein the second non-server type voice packet communication device couples to an NAT (Network Address Translator); and the second non-server type voice packet communication device receives the voice packet through the NAT.

17. The device of claim 16, further comprising:

10 a self-address inquiring module, which transmits a self-address inquiring packet to the NAT.

18. The device of claim 17, wherein the self-address inquiring packet is transmitted to an IP address analyzer through the NAT, and the IP address analyzer sends the IP address data in the header of the self-address inquiring packet back to the non-server type voice packet communication device.

15 19. The device of claim 16, wherein the IP address data include the IP address and the port used by the non-server type voice packet communication device on the NAT.

20. The device of claim 19, wherein the IP address data further includes the IP address of the non-server type voice packet communication device.